PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the **PATENT APPLICATION** of:	
Joseph A. Kwak	
Application No.: 10/085,203	
Confirmation No.: 1835	
Filed: February 27, 2002	
For: IMPLEMENTING A PHYSICAL LAYER AUTOMATIC REPEAT REQUEST FOR A SUBSCRIBER UNIT	
Group: 2662	
Examiner: Saba Tsegaye	

Our File: I-2-0203.3US

Date: September 13, 2004

REPLY BRIEF TO EXAMINER'S ANSWER

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Commissioner for Patents
P.O. Box 1450
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Sir:

This Reply Brief is submitted in response to the Examiner's Answer dated July 12, 2004 [Paper No. 19]. In that answer, the Examiner restated the arguments set forth in the final rejection. Accordingly, Applicants believe that the Appeal Brief adequately addresses these issues. However, Applicant wishes to augment the Appeal Brief with respect to the Examiner's comments regarding use of a high level modulation, on page 16 last partial paragraph of the Examiner's Answer. Schramm does not disclose selecting a higher capacity encoding/modulation scheme in view of

retransmission statistics. The portion of Schramm which the Examiner relies upon in that paragraph is as follows:

> Retransmission techniques operating in accordance with this exemplary embodiment can be summarized by way of the flowchart of FIG. 5 Therein, the loop including steps 60 and 62 waits until a negative ARQ message (indicating an erroneously received block) is received at the transmitting entity, i.e., the RBS 22 above, but can also be the mobile station 12. In the example described in the flowchart, each erroneously received block is sufficient to trigger a selection of a new modulation scheme, at step 64, for the retransmitted block. Then the block is resegmented (mapped) into a new number of bursts at step 66. Finally, the bursts are each modulated using the outer 16QAM modulation signal points, e.g., the subset of 16QAM amplitude coefficients associated with QPSK, at step 68, and retransmission occurs.

Reading this paragraph in its entirety, it is clear this paragraph only describes using a less robust modulation scheme. At steps 60 and 62, messages indicating that blocks were received erroneously are received. It states that each of the receipt messages is sufficient to trigger the selection of the new modulation scheme. This new modulation scheme is then subsequently described as using constellation points from 16QAM modulation (high modulation) to produce coefficients for QPSK (low modulation) modulation. Each received negative acknowledgement is adequate for the Schramm invention to drop from 16QAM to QPSK. However, nowhere within this paragraph or within Schramm does its describe going from, for instance, QPSK to 16QAM, let alone basing this on retransmission statistics.

In view of the foregoing, Applicant respectfully requests that the rejections be withdrawn and all pending claims pass to allowance.

Respectfully submitted,

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